United States Patent and Trademark Office

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/699,508	10/31/2003	Robert H. Wollenberg	T-6298C (538-62)	3589

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EXAMINER
WALLENHORST, MAUREEN

ART UNIT	PAPER NUMBER
1743	

DATE MAILED: 05/27/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

	Application No.	Applicant(s)
Office Action Summary	10/699,508	WOLLENBERG ET AL.
	Examiner	Art Unit
	Maureen M. Wallenhorst	1743

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____ .

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-23* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-23* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____ .

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *4/19/04*.

4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .

5) ☐ Notice of Informal Patent Application (PTO-152)

6) ☐ Other: _____ .

U.S. Patent and Trademark Office

PTOL-326 (Rev. 1-04)   Office Action Summary   Part of Paper No./Mail Date 05162005

1.   The disclosure is objected to because of the following informalities: On page 19,

line 20 of the specification, Applicants are requested to insert the serial number and filing date of

the U.S. patent application referred to.

Appropriate correction is required.

2.   Claim 21 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for

failing to particularly point out and distinctly claim the subject matter which applicant regards as

the invention.

In claim 21, the phrase "the means for measuring deposit formation" lacks antecedent

basis since claim 21 depends from claim 18. In order for this phrase to have proper antecedent

basis, claim 21 should depend from claim 20.

3.   This application currently names joint inventors. In considering patentability of the

claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various

claims was commonly owned at the time any inventions covered therein were made absent any

evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out

the inventor and invention dates of each claim that was not commonly owned at the time a later

invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c)

and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

4.   The nonstatutory double patenting rejection is based on a judicially created doctrine
grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or
improper timewise extension of the "right to exclude" granted by a patent and to prevent possible
harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed.
Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686
F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA
1970);and, *In re Thorington,* 418 F.2d 528, 163 USPQ 644 (CCPA 1969).
A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to
overcome an actual or provisional rejection based on a nonstatutory double patenting ground

provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

5.   Claims 1-3, 6, 11-12, 15-18 and 21-23 are provisionally rejected under the judicially

created doctrine of obviousness-type double patenting as being unpatentable over claims 1-5, 17-

18 and 24-30 of copending Application No. 10/779,422. Although the conflicting claims are not

identical, they are not patentably distinct from each other because both sets of claims recite a

method and system for screening lubricating oil composition samples under program control by

providing a plurality of different lubricating oil composition samples, each sample containing a

major amount of a base oil and a minor amount of a lubricating oil additive, measuring a stability

characteristic of the samples and outputting the results. Since the claims of the instant

application recite that the oxidation stability of the samples can be measured by determining the

amount of deposits that form in each sample on a transparent substrate after a predetermined

time, this is equivalent to the measurement of deposit formation recited in the claims of

application serial no. 10/779,422.

This is a provisional obviousness-type double patenting rejection because the conflicting

claims have not in fact been patented.

6.   Claims 1-3 and 10-14 are provisionally rejected under the judicially created doctrine of

obviousness-type double patenting as being unpatentable over claims 20, 22-24 and 26-30 of

copending Application No. 10/699,529. Although the conflicting claims are not identical, they

are not patentably distinct from each other because both sets of claims recite a method for

producing and screening lubricating oil additive compositions comprising the steps of providing

a plurality of lubricating oil additive compositions, each containing a major amount of a base oil

of lubricating viscosity and a minor amount of an oil additive, measuring composition property

data such as the oxidation stability of the samples, and outputting the results.

This is a provisional obviousness-type double patenting rejection because the conflicting

claims have not in fact been patented.

7.   Claims 1, 3, 10-18 and 22-23 are provisionally rejected under the judicially created

doctrine of obviousness-type double patenting as being unpatentable over claims 1-2, 13-17, 20,

22, 34-37, 39-42 and 44-45 of copending Application No. 10/699,507. Although the conflicting

claims are not identical, they are not patentably distinct from each other because both sets of

claims recite a method and system for screening lubricating oil composition samples under

program control by providing a plurality of different lubricating oil composition samples, each

sample containing a major amount of a base oil and a minor amount of a lubricating oil additive,

measuring stability properties of the samples and outputting the results. It would have been

obvious to one of ordinary skill in the art to either measure the storage stability or the oxidation

stability of the composition samples in the screening method since both equivalently can indicate

the usefulness and performance characteristics of the samples for their intended use as lubricants.

This is a provisional obviousness-type double patenting rejection because the conflicting

claims have not in fact been patented.

8.   Claims 1, 3, 15, 17 and 22 are provisionally rejected under the judicially created doctrine

of obviousness-type double patenting as being unpatentable over claims 1, 13, 19-22 and 33-35

of copending Application No. 10/699,509. Although the conflicting claims are not identical,

they are not patentably distinct from each other because both sets of claims recite a method and

system for screening lubricating oil composition samples under program control by providing a

plurality of different lubricating oil composition samples, each sample containing a major

amount of a base oil and a minor amount of a lubricating oil additive, measuring stability

properties of the samples and outputting the results. It would have been obvious to one of

ordinary skill in the art to either measure the storage stability or the wear stability of the

composition samples in the screening method since both equivalently can indicate the usefulness

and performance characteristics of the samples for their intended use as lubricants.

This is a provisional obviousness-type double patenting rejection because the conflicting

claims have not in fact been patented.

9.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in
> section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are
> such that the subject matter as a whole would have been obvious at the time the invention was made to a person
> having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the
> manner in which the invention was made.

10.   The factual inquiries set forth in *Graham* v. *John Deere Co.*, 383 U.S. 1, 148 USPQ 459

(1966), that are applied for establishing a background for determining obviousness under 35

U.S.C. 103(a) are summarized as follows:

1.   Determining the scope and contents of the prior art.
2.   Ascertaining the differences between the prior art and the claims at issue.
3.   Resolving the level of ordinary skill in the pertinent art.
4.   Considering objective evidence present in the application indicating obviousness
        or nonobviousness.

11.   Claims 1-6, 10 and 15-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Kolosov et al (US 2004/0123650) in view of O'Rear (US 2003/0100453) or Gatto (US

2003/0171226).

Kolosov et al teach of a high throughput testing method and apparatus for the screening

of a library of material samples. The method and apparatus involve combinatorial chemistry that

refers to the synthesis of a collection of diverse materials, and the screening of the materials for

desirable performance characteristics and properties. The combinatorial approach can

effectively evaluate much larger numbers of diverse compounds in a much shorter period of

time. The apparatus taught by Kolosov et al includes a plurality of samples supported in wells

on a substrate. Kolosov et al teach that the invention can be used to screen libraries of any

flowable material that may be a commercial product itself or may be a portion of a commercial

product. Exemplary commercial products that can be tested with the apparatus taught by

Kolosov et al include lubricants and oils. The invention can be used to analyze the resulting

properties of a particular flowing material, and to analyze the relative or comparative effects that

an additive has upon a particular flowable material. Additives in a flowable material to be tested

include a detergent, a flow modifier, etc. See paragraph nos. 0042-0043 in Kolosov et al. The

screening for the effects of different additives upon the characteristics of a flowing material is

performed by measuring various properties of the material samples present in the wells on the

substrate. Properties measured include the viscosity, the density, the thermal degradation, the

aging characteristics, the chemical composition and the agglomeration or sedimentation of the

material samples. See paragraph no. 0065 in Kolosov et al. Once the characterizing properties

of the samples are determined, the results may be mathematically combined in various

combinations to provide figures of merit for the properties of interest. See paragraph no. 0066 in

Kolosov et al. The sample size of each sample in the wells on the substrate is typically no greater

than about 20 ml, more preferably no greater than about 5 ml, and most preferred, no greater than

about 0.5 ml. See paragraph no. 0054 in Kolosov et al. To form an array of samples on the

substrate, Kolosov et al teach that the samples and additives are dispensed into the wells with

any suitable dispensing apparatus (i.e. an automated micropipette or capillary dispenser). The

dispensing apparatus may have a heated tip, thus providing heating of the samples. Each sample

is dispensed to an individually addressable region in the substrate. See paragraph no. 0053 in

Kolosov et al. The plurality of samples can vary in number depending upon the intended use of

the method, and the plurality of samples can form a library. A library comprises an array of two

or more different samples spatially separated on a common substrate. Candidate samples within

a library may differ in a definable and predefined way, such as in chemical structure, processing,

mixtures of interacting components, the relative amounts of the components, the presence of

additives and other reactant materials, etc. The samples are spatially separated on the substrate

such that an array of samples is separately addressable for characterization thereof. The two or

more samples can reside in separate containers formed as wells in a surface of a substrate or can

be simply dispensed onto a common planar substrate. See paragraph no. 0057 in Kolosov et al.

The apparatus taught by Kolosov et al comprises a stimulus generator 12 that applies power to a

probe 14 for applying a stimulus to one or more samples 16 in the array or library of samples.

The apparatus also includes a sensor or transducer 20 for monitoring a response of one or more

of the samples 16 to the stimulus. The transducer 20 and the stimulus generator 12 are both in

communication with a computer sub-system 23 such as a microprocessor or other computer for

manipulating data. The computer sub-system 23 may be employed to receive and store data such

as responses of samples 16, material properties of samples, etc. Additionally, the computer sub-

system may be employed to command other components of the system such as the stimulus

generator and the dispensing means, as well as to correlate responses of samples 16 to their

respective material properties. See paragraph nos. 0067-0068 in Kolosov et al. The probe 14

may be translated, rotated, reciprocated or oscillated within the samples so as to mix the samples

and subject them to different forces. See paragraph no. 0070 in Kolosov et al. For contacting the

probe 14 and dispensing means with the samples 16, the samples may be moved relative to the

probe 14, or alternatively, the probe 14 may be moved relative to the samples 16. Combinations

of these motions may also occur serially or simultaneously. An automated system may be used

to move the one or more probes and the dispensing means serially or simultaneously to the

various samples of a library. A suitable automated system is a robotic system such as an XYZ

robot arm that has a multiple axis range of motion such as in the orthogonal X, Y, and Z

coordinate axes system. This automated system is part of or in communication with the

computer sub-system 23. See paragraph nos. 0073-0074 in Kolosov et al. Kolosov et al also

teach that a plurality of control samples having known material properties are also monitored in

the libraries along with the samples so that the responses of the samples

can be compared with the known material properties of the controls. The responses of the

samples in the library can be related to the known material properties by a mathematical

relationship. Kolosov et al fail to teach that the lubricants containing additives therein in the

combinatorial array can be screened for oxidation stability by either determining the time

required for a lubricant sample to consume a predetermined amount of oxygen or by measuring

the amount of deposits formed by a lubricant sample exposed to oxidation reaction conditions.

O'Rear teaches that the oxidation stability of a lubricant oil sample can be determined by exposing the sample to an oxidative atmosphere, and determining the time required for the sample to adsorb one liter of oxygen. See paragraph nos. 0032-0033 in O'Rear.

Gatto teaches of a method for determining the oxidation stability of a lubricant oil composition by measuring the deposits formed by the sample under high-temperature thin-film oxidation conditions. See paragraph no. 0065 in Gatto.

Based upon the combination of Kolosov et al and either O'Rear or Gatto, it would have been obvious to one of ordinary skill in the art at the time of the instant invention to screen the lubricant/additive compositions in the combinatorial array taught by Kolosov et al for oxidation stability since Kolosov et al teach that the plurality of samples in the array are screened for various material characteristics, and both O'Rear and Gatto teach that it is common to screen lubricating oil compositions for their oxidation stability by either determining the time required for a lubricant sample to consume a predetermined amount of oxygen or by measuring the amount of deposits formed by a lubricant sample exposed to oxidation reaction conditions.

12.   Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kolosov et al in view of Perez et al. For a teaching of Kolosov et al, see previous paragraphs in this Office action. Kolosov et al fail to teach that the lubricants containing additives therein in the combinatorial array can be screened for oxidation stability by using differential scanning calorimetry.

Perez et al teach that differential scanning calorimetry methods can be used to determine the oxidation stability of liquid lubricant compositions containing antioxidant additives therein. See lines 1-12 in column 9 of Perez et al.

Based upon the combination of Kolosov et al and Perez et al, it would have been obvious

to one of ordinary skill in the art at the time of the instant invention to screen the

lubricant/additive compositions in the combinatorial array taught by Kolosov et al for oxidation

stability since Kolosov et al teach that the plurality of samples in the array are screened for

various material characteristics, and Perez et al teach that it is common to screen lubricating oil

compositions for their oxidation stability by using differential scanning calorimetry.

13.   Claims 7-8 and 20-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Kolosov et al in view of O'Rear or Gatto as applied to claims 1-6, 10 and 15-19 above, and

further in view of McFarland et al (US Patent no. 6,541,271, submitted in the Information

Disclosure Statement filed April 19, 2004). For a teaching of Kolosov et al, O'Rear and Gatto,

see previous paragraphs in this Office action. Kolosov et al fail to teach that the lubricants

containing additives therein in the combinatorial array can be screened for oxidation stability by

measuring the amount of deposits formed by a lubricant sample exposed to oxidation reaction

conditions using Fourier-transform infrared spectroscopy.

McFarland et al teach of methods for screening diverse combinatorial arrays of materials

by measuring the materials deposited on a transparent substrate using Fourier-transform infrared

spectroscopy. This method is use to quantify the stability of the materials and characterize

chemical reactions. See the abstract, lines 61-67 in column 15 and lines 1-9 in column 16 of

McFarland et al.

Based on the combination of Kolosov et al, either O'Rear or Gatto and McFarland et al, it

would have been obvious to one of ordinary skill in the art at the time of the instant invention to

screen the lubricant/additive compositions in the combinatorial array taught by Kolosov et al for

oxidation stability for the reasons given above, and to further use Fourier-transform infrared

spectroscopy to analyze the oxidation stability of the lubricant samples in the array since

McFarland et al teach that Fourier-transform IR is an efficient and accurate means to quantify the

stability of materials in a combinatorial array.

14.   Claims 11-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kolosov et

al in view of O'Rear or Gatto as applied to claims 1-6, 10 and 15-19 above, and further in view

of Smrcka et al (EP 1,233,361). For a teaching of Kolosov et al, O'Rear and Gatto, see previous

paragraphs in this Office action. Kolosov et al fail to teach that the results of testing the plurality

of lubricating oil compositions can be stored in a data carrier or transmitted to a remote location.

        Smrcka et al teach of a system and method for managing information pertaining to new

product development. The method comprises the steps of testing a new chemical product, and

storing the results in a data carrier such as a computer readable medium. All the data obtained

through testing of a chemical product is stored in a central database. Remote access to the

database is available globally from any personal computer having suitable client software

installed and suitable network connectivity. See paragraph nos. 0011 and 0038 in Smrcka et al.

        Based upon the combination of Kolosov et al, O'Rear or Gatto and Smrcka et al, it would

have been obvious to one of ordinary skill in the art to store the results of testing the plurality of

lubricating oil compositions taught by Kolosov et al in a data carrier that is available from a

remote access site since Smrcka et al teach that it is advantageous to store the results of testing

for products being newly developed on a computer readable data carrier that is available from a

remote access site in order to share and disseminate the information concerning the new product

to anyone in the world researching that product.

15.   Claims 22-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kolosov et

al in view of O'Rear or Gatto as applied to claims 1-6, 10 and 15-19 above, and further in view

of Garr et al. For a teaching of Kolosov et al, O'Rear and Gatto, see previous paragraphs in this

Office action. Kolosov et al fail to teach that each of the individual test containers that hold the

lubricant samples have a bar code attached thereto.

Garr et al teach that it is common in a combinatorial library of reaction products arranged

in an array to have each individual reaction container identified by a unique code such as a bar

code, which is optically readable. The code can also be stored in the memory of a digital signal

processor on a database. See lines 3-10 in column 4 of Garr et al.

Based upon the combination of Kolosov et al, O'Rear or Gatto and Garr et al, it would

have been obvious to one of ordinary skill in the art at the time of the instant invention to label

each of the individual test containers in the combinatorial array taught by Kolosov et al with a

bar code since Garr et al teach that it is common in the combinatorial library art to uniquely label

individual members of the library with a bar code so as to be able to identify and distinguish the

samples and their unique characteristics from one another.

16.   The prior art made of record and not relied upon is considered pertinent to applicant's

disclosure.

Please make note of: Saul et al (WO 95/13538) and O'Rear et al (WO 02/07870) who

teach of methods using combinatorial chemistry for synthesizing and screening a plurality of

compounds.

17.   Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Maureen M. Wallenhorst whose telephone number is 571-272-

1266. The examiner can normally be reached on Monday-Wednesday from 6:30 AM to 4:00

PM.

        If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Jill Warden, can be reached on 571-272-1267. The fax phone number for the

organization where this application or proceeding is assigned is 703-872-9306.

        Information regarding the status of an application may be obtained from the Patent

Application Information Retrieval (PAIR) system. Status information for published applications

may be obtained from either Private PAIR or Public PAIR. Status information for unpublished

applications is available through Private PAIR only. For more information about the PAIR

system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR

system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

                                                Maureen M. Wallenhorst
                                                Primary Examiner
                                                Art Unit 1743

mmw

May 16, 2005

MAUREEN M. WALLENHORST
PRIMARY EXAMINER
GROUP 1700